MD 355/Rockville Pike Crossing Study
July 20, 2010 Public Meeting
Project Summary

Project Purpose and Need: To improve the movement between the east and west sides of MD 355/Rockville Pike in the vicinity of the Medical Center Metrorail Station, NIH, and NNMC. Project is to address needs anticipated with BRAC traffic and pedestrian volume increases.

- Accommodate the existing and future transit riders who visit, live, or work in the study area
- Provide a safe and efficient crossing of MD 355/Rockville Pike at South Wood Road/South Drive for all pedestrians and bicyclists
- Improve traffic flow into and out of NIH and NNMC at the intersection of South Wood Road/South Drive/MD 355.

Project Goals and Objectives

Primary Goals:

- Improve pedestrian mobility between NNMC, NIH, and Medical Center Metrorail Station facilities through improved crossing of MD 355
- Improve pedestrian safety within the project area by minimizing conflicts with vehicular traffic
- Improve traffic operations to and from NNMC and NIH/Medical Center Metrorail Station at the MD 355/South Wood Road/South Drive intersection

Secondary goals:

- Promote alternative modes of transportation such as rail, bus, car/vanpools, pedestrians and bicycle commuting
- Improve efficiency with which emergency and transit vehicles move between the NIH and NNMC campuses.

Alternatives Screening Criteria: Used to determine alternatives that best meet project needs

- Pedestrian safety, including reduction in pedestrian and vehicle conflicts
- Efficiency of pedestrian and bicycle movements (i.e., travel times and appeal of route)
- Traffic operations at the MD 355/Southwood Road/South Drive intersection (i.e., Level of Service (LOS), intersection queue lengths, delay)
- Compatibility with bus operations
- Compatibility with adjacent projects in the study area
- Compatibility with NNMC proposed gate operations and processing
- Environmental impacts
- Emergency vehicle access

Alternatives Retained for Detailed study (ARDS): The study team initially developed seven conceptual alternatives to address the Purpose and Need and the project Goals and Objectives. The conceptual alternatives where reviewed by the study team and stakeholders in June 10, 2010, which ultimately selected four ARDS – Alternatives 1, 2A, 2B, and 3.

Alternative 1: No-Build

- Used as a basis of comparison for other alternatives

- Does not proposed improvements needed to meet Project Purpose and Need

Alternatives 2A: TSM/TDM with Pedestrian/Bicycle Underpass

- Minor at-grade capacity, traffic calming, and geometric enhancements with grade separated pedestrian and bicyclist facility
- The shallow pedestrian/bicycle underpass would be accessed from the street level via escalator and stairs, providing access to all pedestrians and bicyclists
- Cost: $25-31 million

Alternative 2B: TSM/TDM with Deep Elevators and Shallow Tunnel

- Minor at-grade capacity, traffic calming, and geometric enhancements with grade separated pedestrian and bicyclist facility
- High speed deep elevators would be installed to connect the east side (NNMC) of MD 355 directly to the Metrorail station, 150 feet below the surface.
- The shallow tunnel is proposed for non-metrorail pedestrians crossing MD 355
- Cost: $48-58 million

Alternative 3: Interchange with MD 355 Under South Wood Road/South Drive

- Improves pedestrian mobility and safety by lowering MD 355 under South Wood Road/South Drive, completely separating the pedestrians from the vehicular traffic
- All turning movements would be relocated via a jug handle with new signalized intersections on MD 355 and South Drive
- Improves emergency vehicle and shuttle access between NIH and NNMC
- Cost: $58-70 million

Design Criteria:

- MD 355 posted speed limit and design speed – 35MPH
- MD 355 grades – 6% Maximum
- Vertical overpass clearance – 16 feet (AASHTO Minimum)
- ADA compatible sidewalk and pathway grades – 5% Maximum
- Stopping Sight Distance – 250 feet (AASHTO Minimum)
- Design Vehicle – WB-50 and City Bus

Alternatives NOT Retained for Detailed Study:

Alternative 4: Diamond Interchange

- MD 355 would be lowered beneath a reconstructed South Wood Road/South Drive diamond interchange
- Pedestrian safety remains a concern because pedestrian crossings are not completely separate from vehicle movements
- Impact and cost prohibitive design

Alternative 5: Double Left Turns with Pedestrian/Bicycle Crossing

- Create double left turn lanes from southbound MD 355 into NNMC and from NIH to northbound MD 355 to increase storage of turning vehicles
- Requires realignment of northbound MD 355 travel lanes

Alternative 6: Southbound Jug Handle with Pedestrian/Bicycle Crossing

- Relocate all existing left turning movements to new intersection north of the South Wood Rd./South Drive
- Reconfigure existing intersection to accommodate through and right turning vehicles

- All turning movements would be relocated via jug handle to a signalized intersection on the NIH campus

Alternative 7: Northbound Jug Handle with Pedestrian/Bicycle Crossing

- Reconfigure existing intersection to accommodate through and right turning vehicles
- MD 355 left turns to NNMC and NIH would be relocated via jug handle to a signalized intersection on the NNMC campus

WMATA Pedestrian/Bicycle Overpass

- Provide grade separated crossing of MD 355 via Pedestrian/Bicyclist Overpass.
- Concerns with impacts to Historic Viewsheds, Restricted Airspace, and appeal to pedestrians to utilize

WMATA Deep Elevator Option

- High speed deep elevators would be installed to connect the east side (NNMC) of MD 355 directly to the Metrorail station, 150 feet below the surface.
- Elevators would only provide a benefit to Metrorail riders and would not meet project Purpose and Need

Comparison of Environmental Impacts and Costs

Features	Alternative 2A	Alternative 2B	Alternative 3
Right-of-Way Impacts			
Residential Properties Affected	0	0	0
Number of Commercial Properties Affected	0	0	0
Number of Displacements	0	0	0
NIH Right-of-Way (acres)	0.6	0.6	3.1
NNMC Right-of-Way (acres)	0.5	0.5	1.2
Total Right-of-Way (acres)	1.1	1.1	4.3
Environmental Impacts			
Historic Property – National Register (acres)	0.5	0.5	1.2
Historic Property – National Register Eligible (acres)	0.3	0.3	0.1
Wetlands (acres)	0	0	0
Streams (LF)	0	0	0
Floodplains (acres)	0	0	0
Parks (acres)	0	0	0
Trees – DBH 24” and Larger (number)	17	17	27
Cost (in 2010 Dollars)			
Estimated Total Cost ($millions)	$25-31	$48-58	$58-70